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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,703	08/13/2001	Ulrich Friedrich	1000/0252PUS1	8886
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MG-IP Law, PLLC P.O. BOX 1364 FAIRFAX, VA 22038-1364			EXAMINER AGHDAM, FRESHTEH N	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 01/22/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/929,703

Applicant(s)

FRIEDRICH, ULRICH

Examiner

Freshteh N. Aghdam

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7,10,13,14 and 16-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7,10,13,14 and 16-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/8/2007 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5, 7, 10, 13, 14 and 16-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 7, 16-17, 20-22, 24-25, 30, and 32 are rejected under 35

U.S.C. 102(e) as being anticipated by Schafer (US 6,404,755).

As to claims 1-2, 16-17, 24-25, and 32, Schafer discloses a method for transmitting signals comprising assigning different modulation indices to different information blocks conveying data (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); modulating a signal using quadrature amplitude modulation (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); the modulation indices identifying a type of the conveyed data based on an amplitude of the quadrature amplitude modulation (QAM) index, wherein at least one characteristic physical variable of the carrier signal is modulated in accordance with the different modulation indices assigned respectively to the information blocks that are modulated onto the carrier signal to produce a modulated signal, wherein alongside the frequency and phase, the amplitude is modulated as the characteristic physical variable of the carrier signal (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); the modulated signal is transmitted from the first transceiver to the second transceiver, and the second transceiver evaluates the modulated signal to obtain the conveyed data (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); and transmitting the modulated signal from the transmitting device to a receiving device, wherein inherently the receiving device evaluates the modulated signal to obtain the conveyed data (Fig. 6B, means 651 and 652).

As to claims 3, 5, 27, and 29, Schafer further teaches transmitting successive blocks (Fig. 7).

As to claims 7, 20, and 33, Schafer teaches that not only the modulation indices but also respective period lengths of modulation periods differ respectively from one

another to define additional information symbols (Fig. 7; Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5).

As to claim 13, Schafer teaches a method for transmitting signals comprising assigning different modulation indices to different information blocks conveying data (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); modulating a signal using quadrature amplitude modulation (QAM; Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); the modulation indices identifying a type of the conveyed data based on an amplitude of the quadrature amplitude modulation (QAM) index, wherein at least one characteristic physical variable of the carrier signal is modulated in accordance with the different modulation indices assigned respectively to the information blocks that are modulated onto the carrier signal to produce a modulated signal, wherein at least one of the information blocks includes data for a control signal (i.e. signaling information) and the modulation index of the control signal is smaller than the modulation index of a data signal formed by others of the information blocks (Col. 12, Lines 50-67; Col. 13, Lines 1-5) and the signaling information includes data rate information (Col. 12, Lines 25-30); the modulated signal is transmitted from the first transceiver to the second transceiver, and the second transceiver evaluates the modulated signal to obtain the conveyed data (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5); and transmitting the modulated signal from the transmitting device to a receiving device, wherein inherently the receiving device evaluates the modulated signal to obtain the conveyed data (Fig. 6B, means 651 and 652).

As to claim 21, Schafer teaches transmitting information symbols utilizing different modulation schemes and modulation depths (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5).

As to claim 22, Schafer teaches that the different modulation indices respectively have predefined modulation index values that differ from one another by predefined differences that can be detected and differentiated by the receiving device (Fig. 6B, means 651 and 652).

As to claim 30, Schafer teaches that at least one of said information symbols represents a control signal (i.e. signaling information) and further comprising receiving the control signal in the modulated information signal in the receiving device and controlling the receiving device responsively to the control signal (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer, and further in view of Mousley (US 2002/0172160).

As to claims 18-19, Schafer teaches assigning different modulation indices to different information symbols and as the result identifying the type of information symbol

whether it is a data or a control signal in the receiving device (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5). Schafer is not explicit about the third and fourth modulation indices being assigned to the third and fourth information symbols. Mousley teaches assigning third and fourth modulation indices to third and fourth information symbols in order to robustly transmit information from the transmitter to the receiver (Par. 37). Therefore, it would have been obvious to one of ordinary skill in the art to assign third and fourth modulation indices to third and fourth information symbols as taught by Mousley for the reason stated above.

As to claim 21, Schafer teaches transmitting information symbols utilizing different modulation schemes and modulation depths (Col. 2, Lines 10-36; Col. 3, lines 59-61; Col. 12, Lines 50-67; Col. 13, Lines 1-5).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer, further in view of Fujiwara (US 4,794,649).

As to claim 10, Schafer teaches transmitting signaling information along with the data information to a receiving device (Fig. 7). Schafer is not explicit about the signaling information being a clock signal. Fujiwara teaches in order to establish synchronization, a signaling information (i.e. clock signal) is transmitted from the transmitting device to the receiving device (Col. 6, Lines 13-15). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Fujiwara with Schafer in order to control the receiver both in time and carrier frequency with the stream of

synchronization symbols to increase accuracy of the communication system (Col. 1, Lines 65-67).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer and Fujiwara, further in view of Ricci et al (US 6,463,039).

As to claims 14, Schafer and Fujiwara teach all the subject matter claimed in claim 10, except for the second transceiver has no electronic circuit for clock generation and is a passive transponder that uses the clock signal for local clocking. Ricci teaches providing clock signal and power to the passive transponder (Col. 9, Lines 66 and 67; Col. 10, Lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Ricci with Schafer and Fujiwara in order to provide clock signal to the passive transponder for synchronization purposes and enhance system performance accordingly.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer, and further in view of Ricci et al.

As to claims 31, Schafer teaches all the subject matter claimed in claim 30, except for the second transceiver has no electronic circuit for clock generation and is a passive transponder that uses the clock signal for local clocking. Ricci teaches providing clock signal and power to the passive transponder (Col. 9, Lines 66 and 67; Col. 10, Lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Ricci with Schafer in order to provide clock signal to the

passive transponder for synchronization purposes and enhance system performance accordingly.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer, further in view of Landolsi (US 6,570,842).

As to claim 26, Schafer teaches all the subject matter claimed in claim 16, except for the modulation index being defined as the ratio of the maximum amplitude and a consistent amplitude modulation swing of the respective information signal. Landolsi defines the amplitude modulation index as the ratio of the maximum amplitude and a consistent amplitude modulation swing of the information signal (Col. 7, Lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Landolsi with Schafer in order to compute the modulation indices.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pfeiffer (US 6,671,468) see claim 10.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is 571-272-6037. The examiner can normally be reached on 9:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh N. Aghdam
Examiner
Art Unit 2611

January 8, 2008


CHIEH M. FAN
SUPERVISORY PATENT EXAMINER